CC: H. G. Smyth - ERD, N-13514
B. W. Culpepper, M.D.
J. C. Bonnett, M.D.

PERSONAL & CONFIDENTIAL

TO: C. DE MARTINO

FROM: BRUCE W. KARRH, M.D. BWK March 25, 1981

AMMONIUM PERFLUOROOCTANOATE (FC-143)
C-8 COMPOUNDS

The fluorinated surfactant C-8 compound, which is used in Teflon® manufacture at Parkersburg and in other applications at Chambers Works, has been found to cause scarring of the eyes of rat fetuses following maternal exposures during pregnancy. The study was done by 3-M, the supplier of the material, and was reported by 3-M to EPA under Section 8e of TSCA on Monday, March 23. 3-M does not plan to inform its employees until the second week of April.

Effects were found in the fetuses of mothers exposed at feeding concentrations ranging from 25-150 mg/Kg body weight. A no-effect level has not been determined. Somewhat similar fluorinated alcohol compounds were found by 3-M to have similar teratogenic effects in studies reported to EPA in November 1980. The current study was done for a different reason and the teratogenic effect was an incidental finding. There is reason to question the validity of the study and Dr. R. E. Staples, Teratologist at Haskell Laboratory, is to meet with 3-M this week and review the study and its results. However, the study is probably valid.

At present, about 50 women employees have potential for exposure to C-8 compounds at Parkersburg and an undetermined number at Dordrecht, Chambers Works, and Japan. Of the 50 female employees at Parkersburg, three are pregnant now and 2 probably pregnant. The reproductive capability of the others is unknown at present. One employee who worked in the area had a miscarriage followed immediately by a normal pregnancy with a recent normal outcome. Her potential C-8 exposure throughout both pregnancies was described as "heavy." There was one recent abnormal pregnancy outcome with one female employee at the Plant, but she did not work where there was any possibility of exposure to C-8.

Of the employees presently pregnant, one is in her 7th month, one in her 5th month, one in her 3rd month, and 2 probably just pregnant. One complicating factor is that C-8 is retained in the body for a very long time after exposure ceases.

The plan at present is to convene a meeting after Dr. Staples reviews 3-M's work, probably by March 27. PPD, C&P, Haskell Laboratory, EEO Section, Labor Law Division, Medical Division, Textile Fibers, F&F, and General Legal will participate. If the 3-M study is valid, women of child-bearing potential will probably be excluded from jobs where there is potential for exposure to C-8 compounds, at least until a no-effect level is determined. Present plans are to communicate to employees no later than April 3 and an appropriate package is being prepared now. Haskell Laboratory will determine what additional testing needs to be done.

Please let me know if you need additional information.

BWK:ceb

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Mail type only employee number not name attached

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C-8 BLOOD SAMPLING RESULTS

Births and Pregnancies

Employee Number	~~Current~~ PPM C-8 in Blood ~~(April 1981)~~	Status
	0.45	Normal child - born June 1980. Transferred out of Fluorocarbons 4/79.
	0.28	Normal child - born April 1981.
	0.078	Normal child - born April 1981. Umbilical cord blood 0.055 ppm.
	1.5	~~Five months pregnant~~. On pregnancy leave
	0.013	~~Five months pregnant~~. Normal child - born August 198
	2.5*	Child - 2 plus years. Unconfirmed eye and tear duct defect.
	0.048	Child - 4 months. One nostril and eye defect. Babies blood 0.012ppm
	2.007	Normal child - born July 1981

*Current blood level - in fluorocarbons area only one month before pregnancy.

RDL:ldr